

$$\vec{F}_{rad} = 0$$

$$T = 2 \cdot |\vec{F}| \cdot r$$

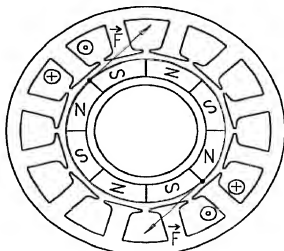


FIG. 1A

$$\vec{F}_{rad} = 2 \cdot \vec{F}$$

$$T = 0$$

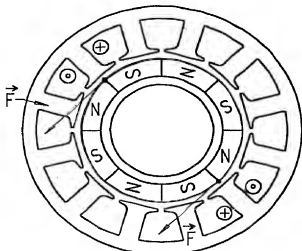


FIG. 1B

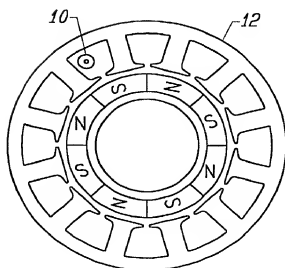


FIG. 2A

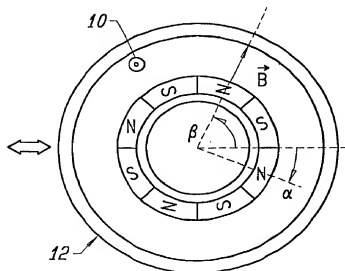


FIG. 2B

$$|\vec{F}| = |\vec{B}| \cdot I \cdot l_{act}$$

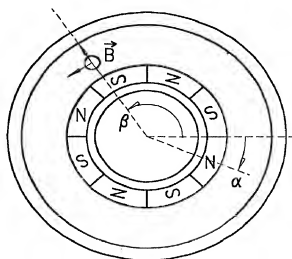


FIG. 3A

$$\vec{F}_{react} = -\vec{F}$$

$$|\vec{F}_{react}| = |\vec{F}|$$

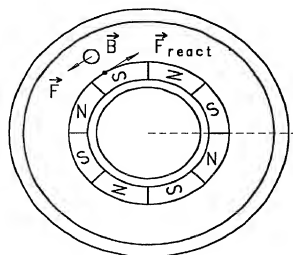
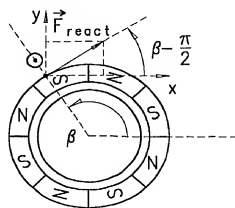


FIG. 3B

$$\vec{F}_{react} \vee |\vec{F}_{react}| > 0$$

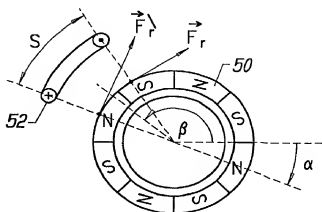


$$F_x = |\vec{F}_{react}| \cdot \sin(\beta)$$

$$F_y = |\vec{F}_{react}| \cdot \cos(\beta + \pi)$$

$$F_y = -|\vec{F}_{react}| \cdot \cos(\beta)$$

FIG. 4



⊕ away from the reader:  $-I$

⊙ towards the reader:  $+I$

FIG. 5

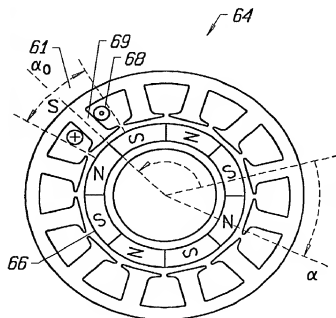


FIG. 6A

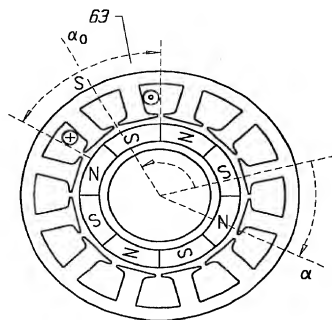
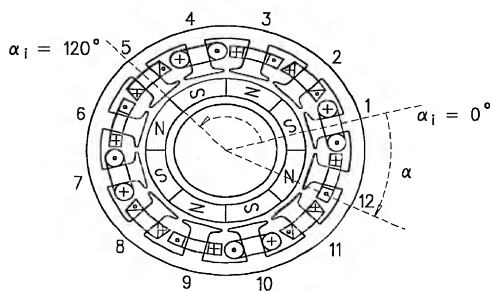
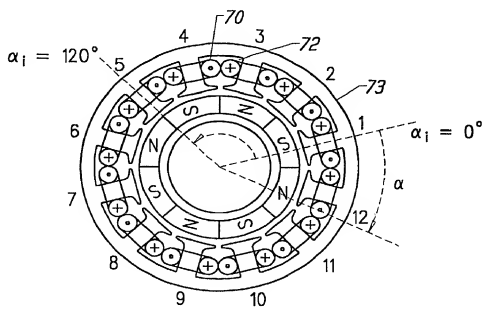


FIG. 6B



phase 1: +1 -3 +5 -7 +9 -11

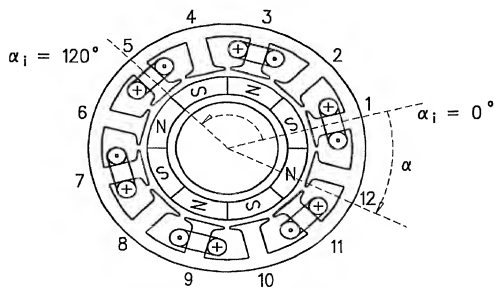


FIG. 9

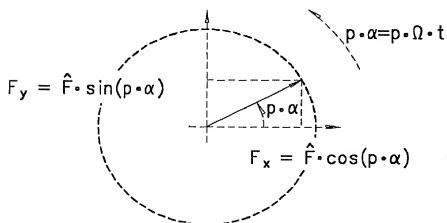


FIG. 10

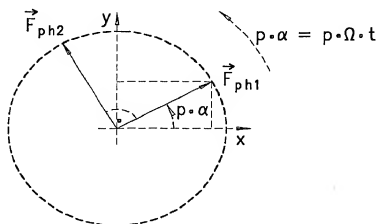


FIG. 11

○ phase 1: +1 -3 +5 -7 +9 -11      ▤ phase 2: +2 -4 +6 -8 +10 -12

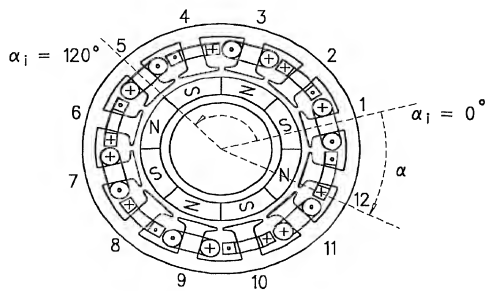


FIG. 12

- phase 1: +1 -3 +5 -7 +9 -11  
 ○ phase 2: +2 -4 +6 -8 +10 -12

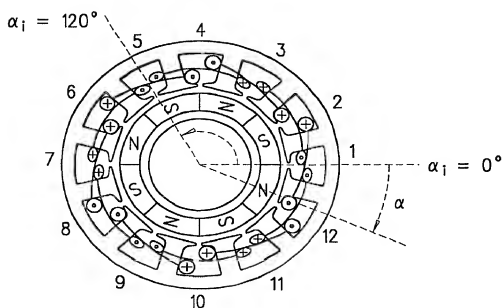


FIG. 13

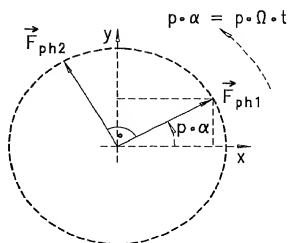


FIG. 14A

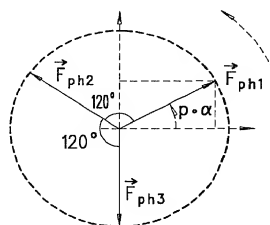


FIG. 14B

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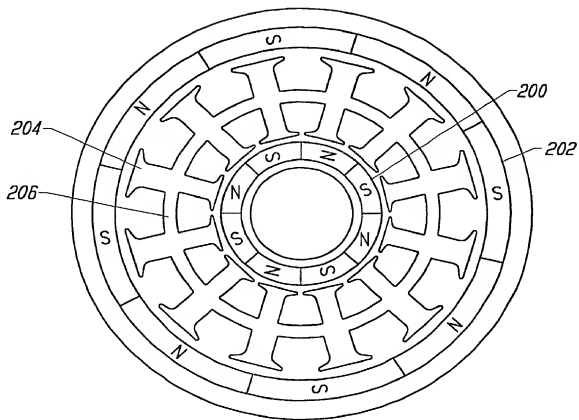


FIG. 15



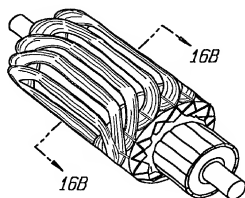


FIG. 16A

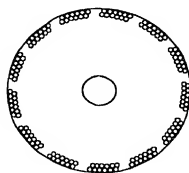
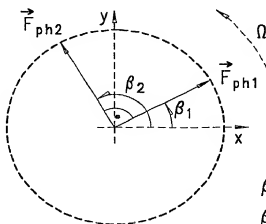


FIG. 16B



$$\beta_1 = p \cdot \alpha = p \cdot \Omega \cdot t$$

$$\beta_2 = p \cdot \alpha - \frac{\pi}{2}$$

FIG. 17

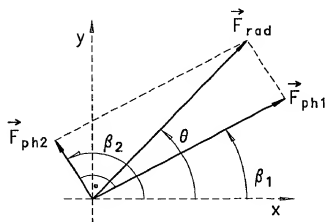


FIG. 18

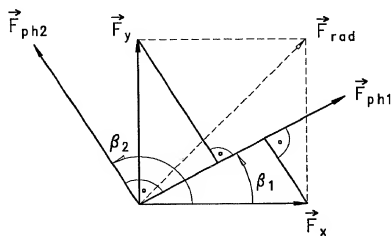


FIG. 19

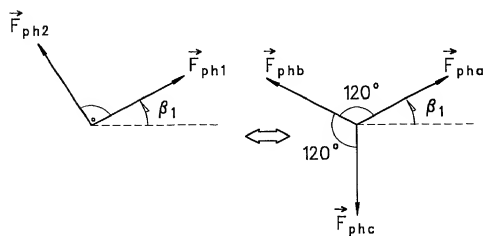


FIG. 20

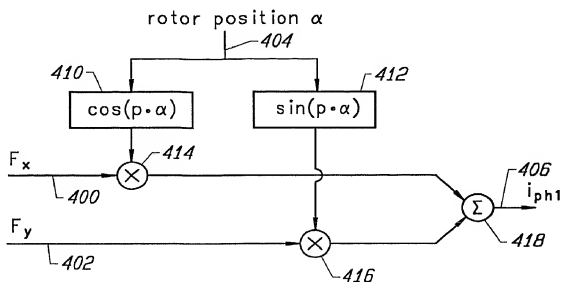


FIG. 21

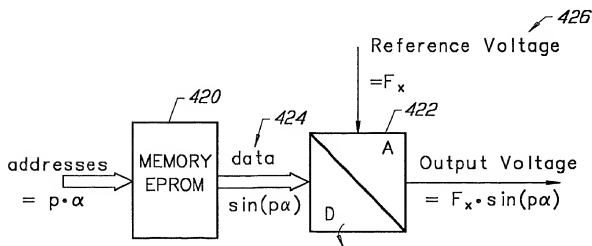


FIG. 22

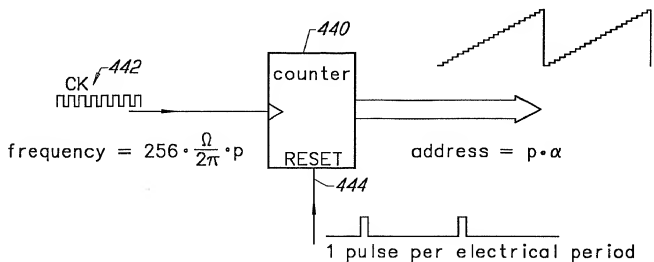


FIG. 23

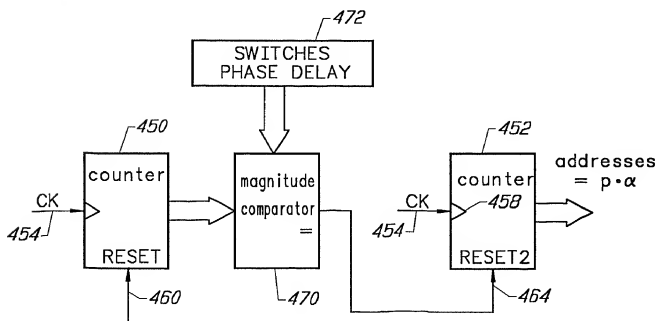


FIG. 24

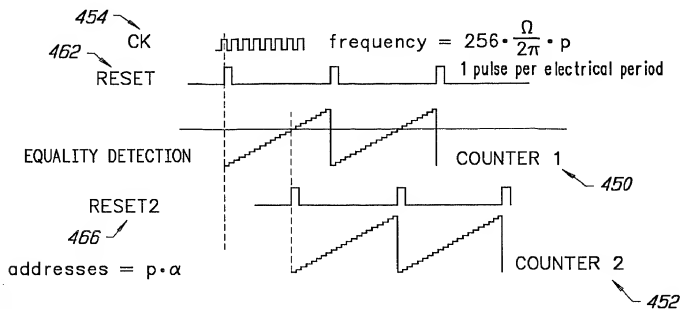


FIG. 25

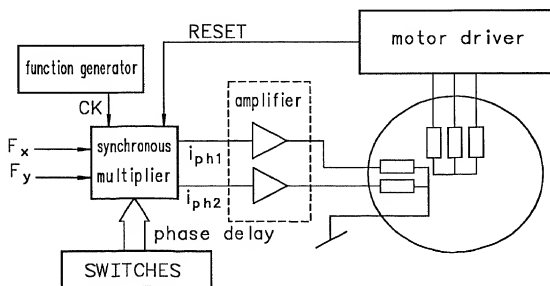


FIG. 28

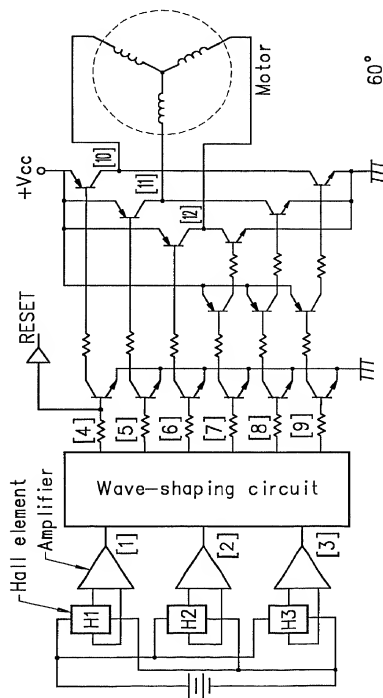


FIG. 26A

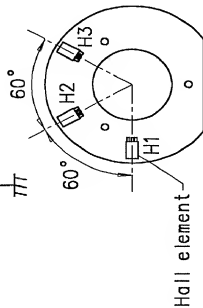


FIG. 26B

(a) Practical circuit of three-phase bipolar driven motor, and arrangement of Hall elements; the number in [ ] correspond to waveform numbers in Fig.

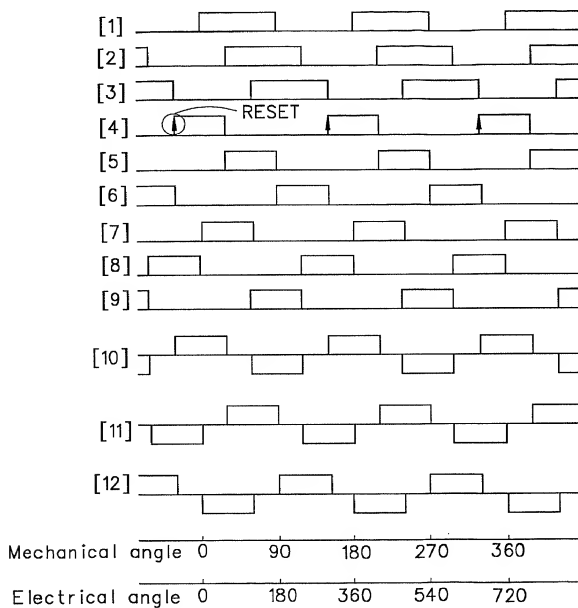


FIG. 27



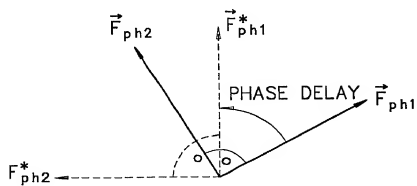


FIG. 29

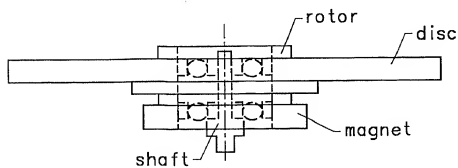


FIG. 30

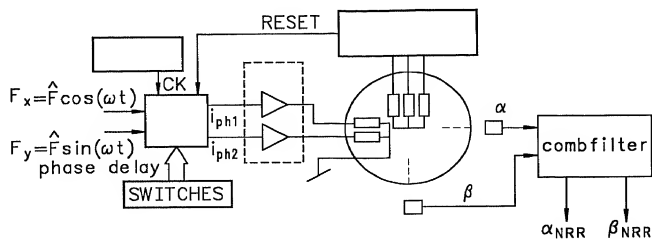


FIG. 31

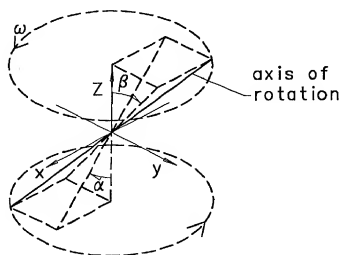
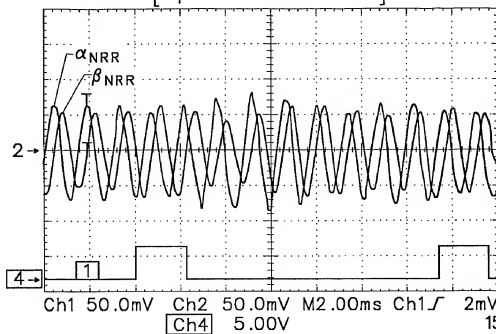


FIG. 32

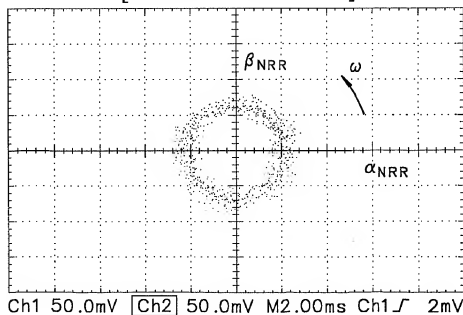
Tek Stop: 50.0kS/s 18 Acqs



15 Oct 1996  
14:03:00

FIG. 33

Tek Stop: 50.0kS/s 102 Acqs



15 Oct 1996  
14:03:30

FIG. 34

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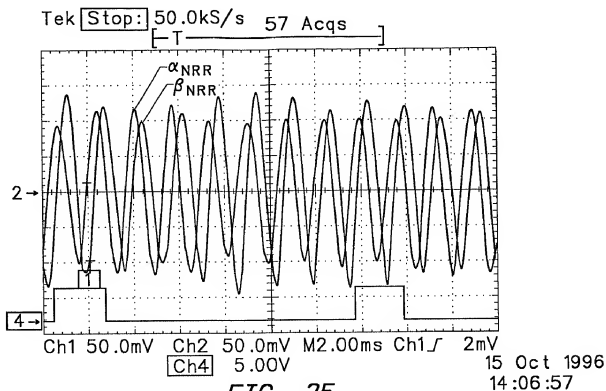


FIG. 35

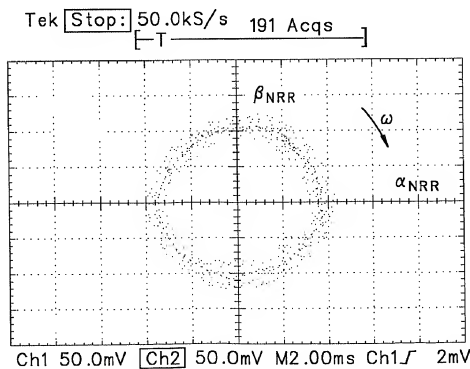


FIG. 36

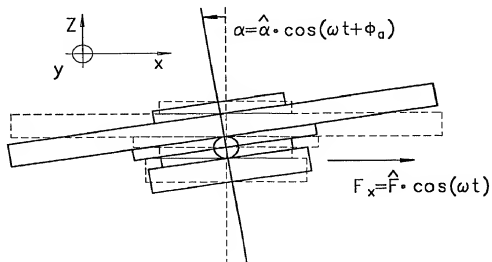


FIG. 37

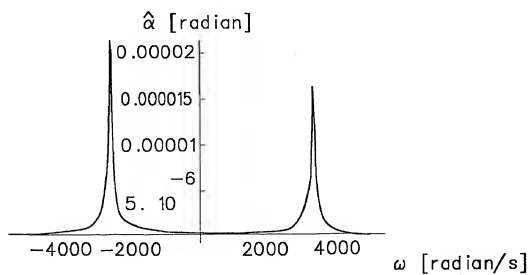


FIG. 38

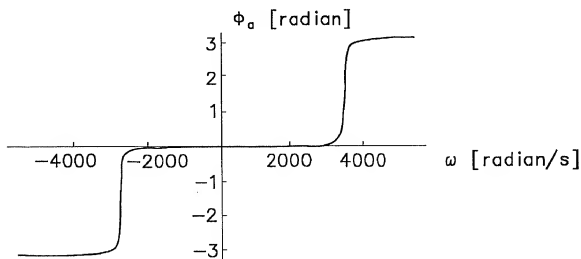


FIG. 39

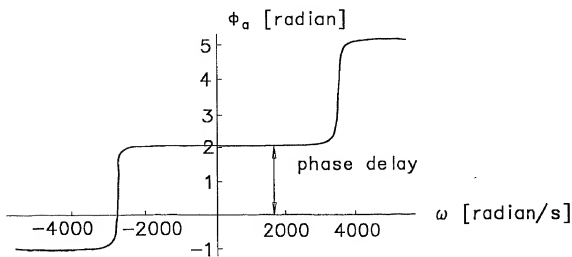


FIG. 40

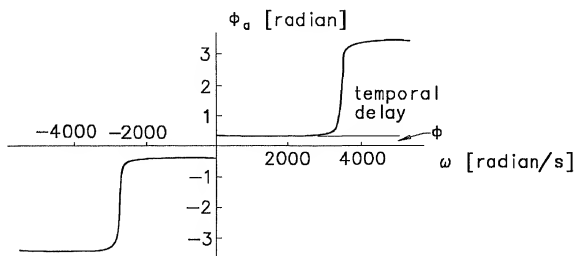


FIG. 41

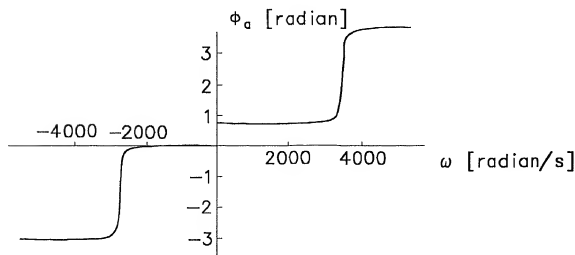


FIG. 42